

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A linear image sensor comprising:
at least one photodiode array; and
a shutter structure provided parallel to the photodiode arrays, the shutter structure including: a shutter electrode; and a shutter drain provided below the shutter gate electrode constituting the shutter structure; a shutter drain and a shutter electrode provided between said photodiode array and said shutter drain, said shutter electrode being continuously extended beyond said shutter drain on a side of said shutter drain opposite to said photodiode array.

2. (original): A linear image sensor according to claim 1, wherein an upper portion of the shutter drain is covered with the shutter gate electrode.

3. (withdrawn): A linear image sensor according to claim 1, wherein the number of the photodiode array is set to only one.

4. (original): A linear image sensor according to claim 1, wherein
the shutter structure is provided between the photodiode arrays.

5. (currently amended): A linear image sensor comprising:
a photodiode array;

a readout gate provided parallel to the photodiode array on one side of the photodiode array;

a CCD shift register provided parallel to the readout gate;

an output circuit provided for output from the CCD shift register; and

a shutter structure provided parallel to the photodiode array on the other side of the photodiode array, the shutter structure including: a shutter gate electrode that is provided parallel to the photodiode array on the other side of the photodiode array; and a shutter drain provided below the shutter gate electrode and a shutter electrode provided between said photodiode array and said shutter drain, said shutter electrode further continuously extending across said shutter drain.

6. (original): A linear image sensor according to claim 5, wherein an upper portion of the shutter drain is covered with the shutter gate electrode.

7. (currently amended): A linear image sensor comprising:

a photodiode array pair provided parallel to each other;

a shutter gate electrode that is provided parallel to the photodiode array pairs pair so as to be common to the photodiode array pair; and

a shutter drain that is provided below the shutter gate electrode;

wherein said shutter electrode is provided between each of said photodiode array pair and said shutter drain, said shutter electrode extending to directly above said shutter drain so that said shutter gate electrode becomes a single shutter gate electrode.

8. (original): A linear image sensor according to claim 7, wherein an upper portion of the shutter drain is covered with the shutter gate electrode.

9. (withdrawn): A linear image sensor according to claim 7, wherein:
three pairs of the photodiode array pair are provided parallel to one another; and
each photodiode array pair includes one of color filters having different colors that are RGB.